

# **Functional Testing and Evaluation of Actiwatch Spectrum Devices for Launch on STS-133/ULF5**

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The Actiwatch Spectrum (AWS) is a wrist-worn device that may be used for obtaining ground or on-orbit light exposure patterns and movement data. The objective of this project was to prepare AWS devices for launch on STS-133/ULF5 by a means of implementing functional tests and engineering evaluations. The data obtained from these tests and evaluations served as a means for detecting any plausible issues that the AWS may encounter while on-orbit. Subsequent steps after detecting anomalies with AWS devices encompassed identifying their root causes and taking the steps needed to mitigate them. As a result of this study, the overall success of sleep/wake research studies for STS-133/ULF5 and future missions will be enhanced.

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